IN THE CLAIMS:

Please cancel claims 8-18, without prejudice.

Please amend the claims as follows:

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1. (Currently amended) A device comprising:

an opto-electronic circuit fabricated on a first substrate having conductive surfaces; and

a package substrate coupled to the opto-electronic circuit at the conductive surfaces via solder bumps.

A1

2. (Original) The device of claim 1, wherein the opto-electronic circuit further comprises:

at least two planar waveguides; and

a heating element coupled to at least one of the two planar waveguides, the heating element coupled to the package substrate via the solder bumps.

3. (Original) The device of claim 2 further comprising:

a conductive strip on the package substrate coupling the heating element to the package substrate.

4. (Original) The device of claim 3 further comprising:

a conductive pad on a side of the package substrate opposite the conductive strip, the conductive pad coupled to the conductive strip through a via, the conductive pad used to surface mount the package substrate.

5. (Original) The device of claim 2, wherein the package substrate comprises ceramic.

6. (Original) The device of claim 2, wherein the heating element is coupled to the package substrate at a first node and a second node of the package substrate.

Concld a1

7. (Original) The device of claim 6 further comprising:
a conductive strip attached to the first node and the second node of the package substrate.

8. – 18. (Canceled).

a2

19. (New) A device comprising:
a first substrate comprising an optoelectronic device having a first waveguide; and
a package substrate coupled to the first substrate via solder bumps.

20. (New) The device of claim 19, wherein the package substrate has a top surface that is coupled to the first substrate, and the package substrate has a bottom surface having electrical bonding surfaces.

21. (New) The device of claim 19, wherein the package substrate has multilayer interconnects therein.

22. (New) The device of claim 19 further comprising:
a heating element fabricated on the first substrate and coupled to the first waveguide.

23. (New) The device of claim 22, wherein a first node of a heating element is solder bonded to a first conductive strip of the package substrate and a second node of the heating element is solder bonded to a second conductive strip of the package substrate.

24. (New) The device of claim 23, further comprising an electrical controller integrated onto the package substrate.

25. (New) A thermo-optic switch comprising:
a first substrate comprising a first waveguide;
a heating element in proximity to the first waveguide; and
a package substrate solder bonded to the first substrate via the heating element.

Concld a2

26. (New) The thermo-optic switch of claim 25, wherein the package substrate has multilayer electrical interconnects therein.

27. (New) The thermo-optic switch of claim 26, wherein the heating element is electrically coupled through the package substrate to electrical bonding surfaces on an exposed surface of the thermo-optic switch.

28. (New) The thermo-optic switch of claim 27, further comprising an electrical controller integrated onto the package substrate.